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09/522,709

03/10/2000

Fernando L. Alvarado

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EXAMINER

CHANDLER, SARA M

ART UNIT

PAPER NUMBER

3693

MAIL DATE

DELIVERY MODE

03/30/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 09/522,709	<b>Applicant(s)</b> ALVARADO ET AL.	
	<b>Examiner</b> SARA CHANDLER	<b>Art Unit</b> 3693	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-3, 17 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3, 17 and 19-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

This Office Action is responsive to Applicant's arguments and request for reconsideration of application 09/522,709 (03/10/00) filed on 01/14/09.

### ***Claim Interpretation***

1. In determining patentability of an invention over the prior art, all claim limitations have been considered and interpreted as broadly as their terms reasonably allow. See MPEP § 2111.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Pruter*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). See MPEP § 2111.

2. All claim limitations have been considered. Additionally, all words in the claims have been considered in judging the patentability of the claims against the prior art. See MPEP 2106 II C. The following language is interpreted as not further limiting the scope of the claimed invention. See MPEP § 2106 II C.

Language in a method claim that states only the intended use or intended result, but the expression does not result in a manipulative difference in the steps of the claim. Language in a system claim that states only the intended use or intended result, but does not result in a structural difference between the claimed invention and the prior art.

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In other words, if the prior art structure is capable of performing the intended use, then it meets the claim.

Claim limitations that contain statement(s) such as “*if, may, might, can could*”, as optional language. As matter of linguistic precision, optional claim elements do not narrow claim limitations, since they can always be omitted.

Claim limitations that contain statement(s) such as “*wherein, whereby*”, that fail to further define the steps or acts to be performed in method claims or the discrete physical structure required of system claims.

USPTO personnel should begin claim analysis by identifying and evaluating each claim limitation. For processes, the claim limitations will define steps or acts to be performed. For products, the claim limitations will define discrete physical structures or materials. Product claims are claims that are directed to either machines, manufactures or compositions of matter. See MPEP § 2106 II C.

The subject matter of a properly construed claim is defined by the terms that limit its scope. It is this subject matter that must be examined. As a general matter, the grammar and intended meaning of terms used in a claim will dictate whether the language limits the claim scope. Language that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation. The following are examples of language that may raise a question as to the limiting effect of the language in a claim:

- (A) statements of intended use or field of use,
- (B) “adapted to” or “adapted for” clauses,
- (C) “wherein” clauses, or
- (D) “whereby” clauses.

See MPEP § 2106 II C.

3. Independent claims are examined together, since they are not patentable distinct. If applicant expressly states on the record that two or more independent and distinct

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inventions are claimed in a single application, the Examiner may require the applicant to elect an invention to which the claims will be restricted.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 1-3, 17 and 19** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1, 17 and 19 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, essential steps and/or essential structural cooperative relationships of elements such omission amounting to a gap between the elements, the steps and/or the necessary structural connections . See MPEP § 2172.01. The omitted elements, steps and/or structural cooperative relationships are:

Claims 1, 17 and 19 recite, “creating a portfolio of future positions which includes selecting a portfolio of price risk instruments which represent distribution factors describing the physics of the flow of electricity in the network and the available market of price instruments; and”

The claim limitation appears inconsistent with the specification in that it focuses on “the distribution factors describing the physics of the flow.” The specification suggests that the portfolio is created based on “the model of locational prices of electricity in the market.” (See Applicant’s Specification, Fig. 3, page 13, line 24 - page 14, line 21). Do the price risk instruments hedge or offset the pattern of spot locational prices determined by the model? It is unclear why the locational prices are modeled if they are not used.

There is insufficient antecedent basis for “the available market of price instruments” in the claim.

Claims 1, 17 and 19 recite, “a computer producing a combination of price risk instruments for the market in which at least one amount of each of the price risk instruments are proportioned **to cause** the eventual locational prices **to be** interlocked **such that** an effect of the congestion prices for the plurality of congestible transmission lines on the locational prices of the electricity is reduced.”

It is also unclear how the “creating ....” step and the “producing .....” step relate. Are they alternative ways of saying the same thing (e.g., finding a way to hedge using the price risk instrument)? Are the “combination of price risk instruments” a subset of the “portfolio of price risk instruments”?

The bolded and italicized language also incorporates intended use/result language, passive language. The use of this language makes the scope of the claims unclear. See notes supra on claim interpretation.

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There is insufficient antecedent basis for “the eventual locational prices” in the claim.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claims 1-3, 17, 19, 20 and 21:** are rejected under 35 U.S.C. 103(a) as being unpatentable over “Pricing Scarce Transmission In a Bilateral Market,” by Steven Stoft, January 31, 1998. (hereinafter Stoft). in view of “Primer on Electricity Futures and Other Derivatives,” by S. Stoft, T. Belden, C. Goldman, and S. Pickle, January 1998. (hereinafter S.Stoft)

**Re Claims 1-3 and 17:** Stoft discloses a computerized method/computer-readable medium/ for managing risk in a market related to electricity delivered over a network

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comprised of tradable network locations, comprising the steps of:

modeling locational prices of the electricity in the market as a linear combination of congestion prices for a plurality of congestible transmission lines in the network (Stoft, pgs. 1-8, particularly pgs. 1-3), wherein said step of modeling locational prices comprises:

determining a set of distribution factors representing the physics of the flow of electricity in the network (Stoft, pgs. 1-8, particularly pgs. 1-3 Distribution Factor = DF),

determining a plurality of values representing the prices of congestion for the congestible transmission lines at a prospective time (Stoft, pgs. 1-8, particularly pgs. 1-3 Prices of Congestion =  $P_{12}$ ,  $Q \times P_{12}$ ), and

determining a pattern of spot locational prices in the network at the prospective time, wherein said pattern of spot locational prices is a function of said set of distribution factors and said plurality of values representing the prices of congestion for the congestible lines (Stoft, pgs. 1-8, particularly pgs. 1-3 Pattern of Spot Locational Prices = function of  $Q \times P_{12} \times DF$ );

Stoft fails to explicitly disclose:

creating a portfolio of future positions which includes selecting a portfolio of price risk instruments which represent distribution factors describing the physics of the flow of electricity in the network and the available market of price instruments; and

producing a combination of price risk instruments for the market in which at least one amount of each of the price risk instruments are proportioned to cause the eventual locational prices to be interlocked such that an effect of the congestion prices for the

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plurality of congestible transmission lines on the locational prices of the electricity is reduced.

S.Stoft discloses:

creating a portfolio of future positions which includes selecting a portfolio of price risk instruments which represent distribution factors describing the physics of the flow of electricity in the network and the available market of price instruments (S.Stoft et. al., pgs. ix,xv, 1-44, particularly pgs ix, 1,14-15,20-22,24-25,29); and

producing a combination of price risk instruments for the market in which at least one amount of each of the price risk instruments are proportioned to cause the eventual locational prices to be interlocked such that an effect of the congestion prices for the plurality of congestible transmission lines on the locational prices of the electricity is reduced (S.Stoft et. al., pgs. ix,xv, 1-44, particularly pgs ix, 1,14-15,20-22,24-25,29).

Regarding, implementation by a computer/computer-readable medium.

#### Making Automatic

It is not 'invention' to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result. *In re Venner*, 120 USPQ 192 (CCPA 1958) *In re Rundell*, 9 USPQ 220. See MPEP 2144.04 III.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Stoft by adopting the teachings of S.Stoft to provide creating a portfolio of future positions which includes selecting a portfolio of price risk instruments which represent distribution factors describing the physics of the

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flow of electricity in the network and the available market of price instruments; and producing a combination of price risk instruments for the market in which at least one amount of each of the price risk instruments are proportioned to cause the eventual locational prices to be interlocked such that an effect of the congestion prices for the plurality of congestible transmission lines on the locational prices of the electricity is reduced.

As suggested by S.Stoft et. al. increased competition for commodities (i.e., such as power and electricity) will lead to greater price volatility, and price risk instruments (i.e., such as derivatives) can help market participants manage or hedge these prices risks (S.Stoft et. al. pgs. ix,1).

The claimed invention applies a known technique to a known device (method, or product) ready for improvement to yield predictable results. Thus, the claimed subject matter likely would have been obvious under KSR. KSR, 127 S.Ct. at 1741, 82 USPQ2d at 1396.

Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in art. Thus, the claimed subject matter likely would have been obvious under KSR. KSR, 127 S.Ct. at 1741, 82 USPQ2d at 1396.

**Re Claims 19 and 20:** Stoft discloses a portfolio generating system and portfolio comprising:

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modeling locational prices of electricity in the market as a linear combination of congestion prices for a plurality of congestible transmission lines in the network (Stoft, pgs. 1-8, particularly pgs. 1-3), wherein said step of modeling locational prices comprises:

determining a set of distribution factors representing the physics of the flow of electricity in the network (Stoft, pgs. 1-8, particularly pgs. 1-3 Distribution Factor = DF),

determining a plurality of values representing the prices of congestion for the congestible transmission lines at a prospective time (Stoft, pgs. 1-8, particularly pgs. 1-3 Prices of Congestion =  $P_{12}, Q \times P_{12}$ ), and

determining a pattern of spot locational prices in the network at the prospective time, wherein said pattern of spot locational prices is a function of said set of distribution factors and said plurality of values representing the prices of congestion for the congestible lines (Stoft, pgs. 1-8, particularly pgs. 1-3 Pattern of Spot Locational Prices = function of  $Q \times P_{12} \times DF$ ).

Stoft fails to explicitly disclose:

creating a portfolio of future positions which includes selecting a portfolio of price risk instruments which represent distribution factors describing the physics of the flow of electricity in the network and the available market of price instruments; and

producing a combination of price risk instruments for the market in which at least one amount of each of the price risk instruments are proportioned to cause the eventual

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locational prices to be interlocked such that an effect of the congestion prices for the plurality of congestible transmission lines on the locational prices of the electricity is reduced.

the portfolio comprising:

the plurality of price risk instruments for a market related to electricity delivered over a network,

wherein the price risk instruments  $y$  are proportioned such that  $z'A - y'P'A = O$ ,

$A$  represents distribution factors describing the physics of power flows in the network,

$P$  represents the available market of price instruments,

$z$  represents a market participant's underlying position in the market at a prospective time

$T$ , and

primes denote transpositions; and

a computer-based system configured to generate a portfolio having a plurality of price risk instruments, wherein said computer-based system comprises:

a communication mechanism for communicating information;

a processor coupled to the communication mechanism for processing information;

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a dynamic storage device coupled to the communication mechanism for storing information and instructions; and

a static storage device coupled to the communication mechanism for storing static information and instructions.

S.Stoft discloses:

creating a portfolio of future positions which includes selecting a portfolio of price risk instruments which represent distribution factors describing the physics of the flow of electricity in the network and the available market of price instruments (S.Stoft et. al., pgs. ix,xv, 1-44, particularly pgs ix, 1,14-15,20-22,24-25,29); and

producing a combination of price risk instruments for the market in which at least one amount of each of the price risk instruments are proportioned to cause the eventual locational prices to be interlocked such that an effect of the congestion prices for the plurality of congestible transmission lines on the locational prices of the electricity is reduced (S.Stoft et. al., pgs. ix,xv, 1-44, particularly pgs ix, 1,14-15,20-22,24-25,29).

the portfolio comprising: the plurality of price risk instruments for a market related to electricity delivered over a network, wherein the price risk instruments  $y$  are proportioned such that  $z'A - y'P'A = 0$ ,  $A$  represents distribution factors describing the physics of power flows in the network,  $P$  represents the available market of price instruments,  $z$  represents a market participant's underlying position in the market at a prospective time  $T$ , and primes denote transpositions (S.Stoft et. al., pgs. ix,xv, 1-44, particularly pgs ix, 1,14-15,20-22,24-25,29 Nonfunctional Descriptive Material

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Descriptive material (e.g. music, literature, art, photographs and mere arrangements or compilations of facts or data) that cannot exhibit any functional interrelationship with the way in which computing processes are performed does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. 101. That is this type of descriptive material called nonfunctional descriptive material whether or not stored on a medium is not statutory. See MPEP §2106.01.); and

Regarding, a computer-based system configured to generate a portfolio having a plurality of price risk instruments, wherein said computer-based system comprises: a communication mechanism for communicating information; a processor coupled to the communication mechanism for processing information; a dynamic storage device coupled to the communication mechanism for storing information and instructions; and a static storage device coupled to the communication mechanism for storing static information and instructions.

#### Making Automatic

It is not 'invention' to broadly provide a mechanical or automatic means to replace manual activity which has accomplished the same result. *In re Venner*, 120 USPQ 192 (CCPA 1958) *In re Rundell*, 9 USPQ 220. See MPEP 2144.04 III.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the teachings of Stoft by adopting the teachings of S.Stoft to provide creating a portfolio of future positions which includes selecting a portfolio of

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price risk instruments which represent distribution factors describing the physics of the flow of electricity in the network and the available market of price instruments; and producing a combination of price risk instruments for the market in which at least one amount of each of the price risk instruments are proportioned to cause the eventual locational prices to be interlocked such that an effect of the congestion prices for the plurality of congestible transmission lines on the locational prices of the electricity is reduced; the portfolio comprising: the plurality of price risk instruments for a market related to electricity delivered over a network, wherein the price risk instruments  $y$  are proportioned such that  $z'A - y'P'A = 0$ ,  $A$  represents distribution factors describing the physics of power flows in the network,  $P$  represents the available market of price instruments,  $z$  represents a market participant's underlying position in the market at a prospective time  $T$ , and primes denote transpositions; and a computer-based system configured to generate a portfolio having a plurality of price risk instruments, wherein said computer-based system comprises: a communication mechanism for communicating information; a processor coupled to the communication mechanism for processing information; a dynamic storage device coupled to the communication mechanism for storing information and instructions; and a static storage device coupled to the communication mechanism for storing static information and instructions.

As suggested by S.Stoft et. al. increased competition for commodities (i.e., such as power and electricity) will lead to greater price volatility, and price risk instruments (i.e., such as derivatives) can help market participants manage or hedge these prices risks (S.Stoft et. al. pgs. ix,1).

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The claimed invention applies a known technique to a known device (method, or product) ready for improvement to yield predictable results. Thus, the claimed subject matter likely would have been obvious under KSR. KSR, 127 S.Ct. at 1741, 82 USPQ2d at 1396.

Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in art. Thus, the claimed subject matter likely would have been obvious under KSR. KSR, 127 S.Ct. at 1741, 82 USPQ2d at 1396.

### ***Response to Arguments***

#### **101**

Withdrawn in light of applicants amendments

#### **112, ¶1**

Withdrawn in light of applicants amendments

#### **Prior Art/Remarks**

Applicant's arguments have been fully considered but they are not persuasive..

Applicant argues, Stoft only refers to congestion pricing describe the theory in the *spot* electricity market (see, Abstract of Stoft). One aspect of one of the present embodiments is the assumption that the spot pricing in electricity markets is efficient (and this is well-known in the art), but that the forward or futures markets may not be efficient.

With reference to the model, the claimed invention only references “determining a pattern of spot locational prices” and fails to be limited to the forward or futures market. Even if Stoft is limited to Chao-Peck pricing, the pricing referenced in the claim is broad enough to include Chao-Peck pricing. The claim is not limited to some exclusive alternative to Chao-Peck pricing.

Applicant argues, none of the cited prior art references address forwards or forwards.

In S.Stoft, the derivatives may be both forwards and futures.

Applicant argues, none of the cited prior art references address the issue of futures portfolio positions in a market with the unique characteristics of a power market.

Analogous Art: It has been held that a prior art reference must either be in the field of applicant’s endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

Both Stoft and S.Stoft are in the same field of endeavor in that they are related to energy (e.g., Stoft) and electricity (e.g., S.Stoft). Whether called energy, electricity or power as in the claimed invention all are in the same field on endeavor and pertain to the pricing of such utilities.

Furthermore, Stoft addresses the same problem because it teaches that congestion prices (P12, Q X P12) and distribution factors (DF) may be used in the modeling of locational prices.

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Furthermore, S.Stoft addresses the same problem because it teaches that the position held in a combination of price risk instruments (i.e., the financial instrument or instruments used in the hedging strategy) can be used such that the effect of the congestion prices for the congestible lines on the locational prices of the commodity are reduced (i.e., reducing or eliminating the risk or exposure caused by the original position held).

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SARA CHANDLER whose telephone number is (571)272-1186. The examiner can normally be reached on 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Kramer can be reached on 571-272-6783. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/James A. Kramer/  
Supervisory Patent Examiner, Art Unit 3693

SMC